

Revised Estimates of GNP by Major Industries

REVISED annual statistics pertaining to gross national product by industry of origin, 1947-63, and estimates for 1964-65, which are given here for the first time, appear in tables 1 through 4 of this article. Table 1 contains estimates of industry gross product in current dollars, and table 2, in constant (1958) dollars. Table 3 shows indexes of constant dollar gross product (1958=100), and table 4, implicit price deflators. Preliminary 1966 estimates of gross product in constant dollars are shown in table A below. Tables 1-4 include more industry detail for the transportation, communication, and trade industries than the previously published series.¹

The revised industry data reflect the statistical and definitional revisions incorporated into the national accounts in mid-1965,² changes in industry definitions, information from more recent sources (including the 1958 Inter-industry Relations Study),³ and improvements in estimating methods. The following discussion defines industry gross product, compares the new measures of production and prices with the ones previously published, and describes the principal factors that contributed to revisions in the industry totals.

Industry gross product defined and measured

Gross product originating in an industry is a measure of an industry's

contribution to the Nation's total output of goods and services, as defined in the national income and product accounts. An industry's gross product or value added may be measured as the amount by which the total value of its output exceeds the cost of purchased intermediate products (materials and business services) used in production. The gross product is also equal to the sum of the industry's factor payments (employee compensation, profits, net interest, etc.) and of its nonfactor costs of production (indirect business taxes, depreciation, etc.). Measured by either method, the sum of the gross products of all industries is equal to the Nation's output as measured by total GNP.

For the accompanying tables, the current dollar measures of an industry's gross product are derived as the sum of its factor payments and its nonfactor costs (table 1). The gross product of an industry derived in this way is not directly convertible into constant dollars (real product) because the factor and nonfactor costs—employee compensation, profits, depreciation, etc.—cannot be expressed in

quantities and unit prices suitable for this purpose. However, as was indicated in the October 1962 Survey, gross product can be adjusted indirectly for price changes by deflating output and purchases separately, since both the output and the purchases consist of goods and services that can be analyzed into quantity and price. The difference between the two deflated figures is gross product in constant dollars. This procedure, known as the "double deflation" method, underlies about half of the estimates shown here, but when data on output and purchases were not available, estimates of real product were based on measures of the quantity of total output.⁴

For statistical reasons, the sum of the deflated industry gross products may differ slightly from the regularly published estimates of constant dollar GNP for the Nation. The amount of this difference, shown as the "residual" in table 2, arises from two sources: (1) the sum of factor and nonfactor charges in current dollars differs from the current dollar GNP measured as the value of sales to final markets and inventory change by an amount that is called the "statistical discrepancy," and (2) the price series and their weights used to deflate gross product by industry differ from those used to deflate final products. No attempt has been made to allocate these two sources of discrepancy to specific industries.

Effect of revisions

As the article in the August 1965 Survey indicated, the revised GNP for the total economy, measured in con-

Table A.—Gross Product in Constant Dollars by Industry: 1965-66

(Millions of 1958 dollars)

Industry	1965	1966
All industries total (GNP).....	614.4	646
Agriculture, forestry, and fisheries.....	25.1	24
Mining.....	14.8	15
Contract construction.....	22.2	23
Manufacturing.....	188.7	203
Transportation.....	27.8	30
Communication.....	14.3	16
Electric, gas, and sanitary services.....	16.1	17
Wholesale and retail trade.....	105.6	110½
Finance, insurance, and real estate.....	32.4	37
Services.....	57.1	60
Government and government enterprises.....	58.1	63
Rest of the world.....	4.1	4
Residual.....	-2.8	-3½

NOTE.—The 1966 industry estimates are based upon incomplete statistical information and summary estimating techniques.

4. A discussion of the methods employed appears in *GNP by Major Industry, Concepts and Methods*, which is available upon request to the Office of Business Economics.

NOTE: Richard C. Ziemer and George B. Erner had a major part in developing the basic estimates. Statistical assistance was provided primarily by Vesta C. Jones.

1. SURVEY OF CURRENT BUSINESS, October 1962, p. 8 ff.; September 1963, p. 9 ff.; and September 1964, p. 10 ff.

2. SURVEY, August 1965, p. 6 ff.

3. SURVEY, November 1964, p. 10 ff.; September 1965, p. 33 ff.

stant (1958) dollars, grew at a rate of 3.7 percent a year from 1947 to 1963, as compared with 3.5 percent for the superseded series. (The last year for which data for the old industry series were calculated was 1963.) The upward revisions for contract construction, manufacturing, communications, and trade are larger than the 0.2-point spread in total GNP. However, the real product series for transportation, services, and the electric, gas, and sanitary service industries were revised downward. The growth rates for agriculture, mining, and government were raised only fractionally by the revisions, while the trend difference between the new and the old series for the finance, insurance, and real estate industry approximated that for the economy as a whole. The growth rates for both

the revised and the earlier series for electric, gas, and sanitary services, communication, and finance, insurance, and real estate are higher than the average, while the rates for mining, agriculture, and transportation are below the average. Both the new and the old series show that service-type industries generally increased faster than the industries producing and distributing goods.

Revisions in real gross product for an industry resulted from changes in the current dollar measures of gross product and/or in the deflators. Table B gives some notion of how the estimates of real product were affected, on the one hand, by revisions in current dollars and, on the other, by revisions in the implicit deflators.⁵ It shows, by industry, the 1947-63 average annual rates of change in real output, in current dollar output, and in the implicit deflators for the new and the old series. For this period, revisions in deflators were more significant than revisions in current dollars for contract construction, transportation, trade, and electric, gas, and sanitary services. In contrast, revisions in real product for manufacturing and communications were due primarily to revisions in the current dollar series.

Revisions in current dollars

The August 1965 Survey described the nature and extent of the revisions of the estimates of postwar GNP. For most industries except services and real estate, the definitional changes in the accounts had no effect on the current dollar totals or resulted in only minor changes in them. The totals for services were reduced because interest paid by consumers is no longer regarded as production; formerly, such payments were considered to be production by the household industry, a component of services. The totals for the real estate industry were raised because the current concepts provide for the capitalization of real estate commissions. This

Table B.—Average Annual Percentage Rate of Change in Gross Product in Constant (1958) and Current Dollars, and Implicit Deflators by Industry: 1947-63

Industry	Constant (1958) dollars	Current dollars	Implicit deflators
All industries, total (GNP):			
New series	3.7	5.0	2.3
Old series	3.5	5.0	2.2
Agriculture, forestry and fishing:			
New series	1.9	.6	-1.2
Old series	1.8	.6	-1.2
Mining:			
New series	2.0	4.2	3.2
Old series	1.0	4.0	2.1
Contract construction:			
New series	3.4	7.1	3.6
Old series	2.8	7.1	4.1
Manufacturing:			
New series	3.0	5.9	2.9
Old series	3.2	5.6	2.3
Transportation:			
New series	1.1	3.9	2.8
Old series	3.0	3.7	1.7
Communication:			
New series	7.2	8.3	2.0
Old series	0.6	8.7	2.0
Electric, gas, and sanitary services:			
New series	7.8	8.0	1.1
Old series	0.0	8.7	-3
Wholesale and retail trade:			
New series	3.6	5.2	1.5
Old series	3.0	5.1	3.0
Finance, insurance and real estate:			
New series	4.7	8.3	3.4
Old series	4.6	7.7	3.0
Services:			
New series	2.4	2.1	3.5
Old series	3.0	7.3	3.0
Government and government enterprises:			
New series	3.2	8.0	4.0
Old series	3.2	7.0	4.5

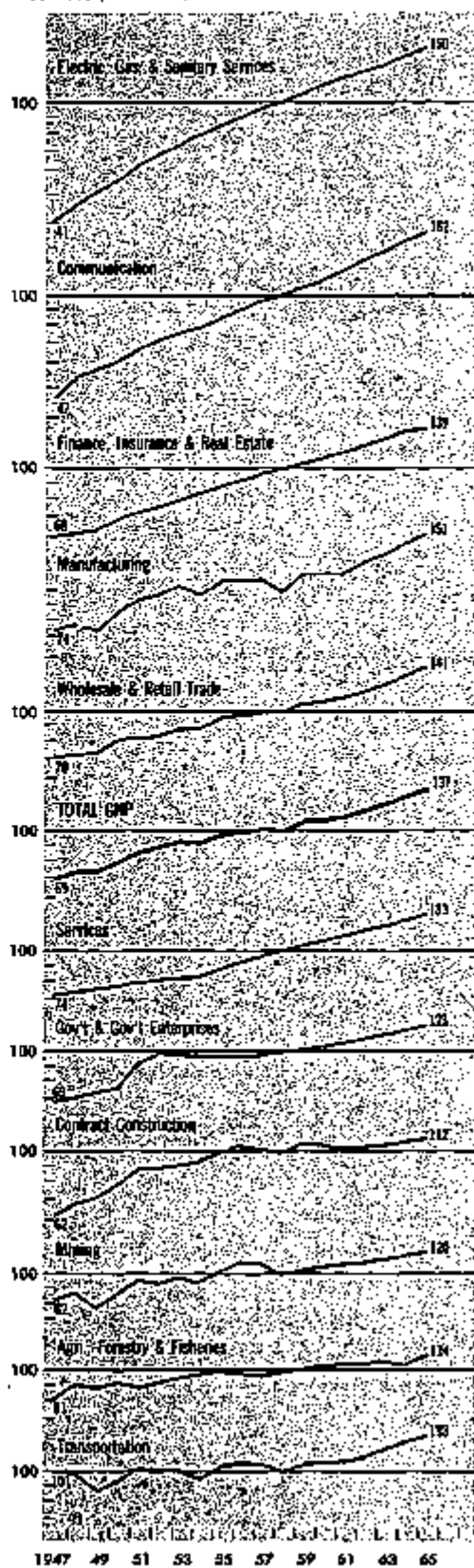
NOTE.—Figures show the average annual compounded rate of change between the initial and terminal years of each period.

5. The article "GNP by Major Industries" in the October 1962 Survey discusses implicit deflators for industry gross product in detail and describes special qualifications applicable to deflators for the construction, services, and government industries.

CHART 5

Indexes of Real Output by Industry, 1947-65

1958=100 (Ratio Scale)



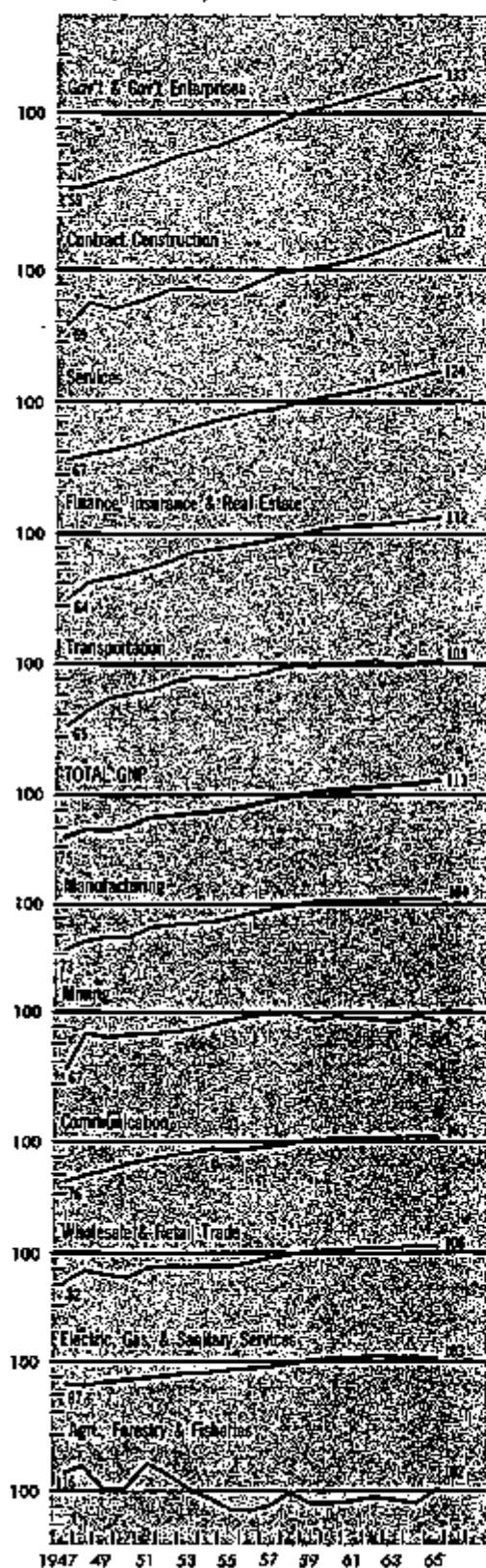
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CHART 6

Implicit Price Deflators
by Industry, 1947-65

1958 = 100 (Ratio Scale)



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resulted in higher profit-type income for this industry.

The statistical revisions in profit-type income and capital consumption allowances in the national accounts stemmed largely from revisions in the estimates of rent on nonfarm structures. The totals for the real estate industry were correspondingly increased.

In addition, current dollar estimates of gross product by industry were affected by a number of other factors, the most important of which are noted below.

New industry classifications. The former industry series represented classifications based on the 1945 edition of the *Standard Industrial Classification Manual* (SIC) for manufacturing and on the 1942 edition for nonmanufacturing industries. The industry classification for the new series follows the 1957 edition of the SIC manual. The main effect of these changes on the gross product was to shift gross product from wholesale and retail trade to manufacturing and services.

Company-establishment adjustment. New methods and data sources were adopted to adjust the industry classification of profits and capital consumption allowances from a company to an establishment basis. For all industries except petroleum refining and crude petroleum and natural gas, the basic data source used was the Census publication *Enterprise Statistics: 1958, Part 3, Link of Census Establishment and IRS Corporation Data*. For petroleum refining and the crude petroleum and natural gas industries, it was necessary to develop special procedures, which differ substantially from those used for the old series. As a result, the most important revisions that are due to the company-establishment adjustment occur in mining; revisions are relatively smaller for manufacturing and have little or no effect on the totals for other industries.

Statistical discrepancy. In the former current dollar industry series, the total gross product for each industry—except general government, rest of the world, households and institutions, and farms—was adjusted to include a pro-

Table C.—Average Annual Percentage Change in Manufacturing Output OBE and FRB, Selected Periods

Years	Gross product originating		FRB series
	Original series	Revised series	
1947-1965		4.1	4.4
1947-1963	5.3	5.3	5.7
1963-1967	1.1	1.1	2.1
1967-1969	1.1	1.8	2.6
1969-1966		4.0	4.9

NOTE.—Figures show the average annual compounded rate of change between the initial and terminal years of each period.

portionate amount of the statistical discrepancy.⁶ In the revised current dollar series, the statistical discrepancy appears as a separate line item in table 1 (as in the traditional income and product accounts) and is not prorated among the industries.

Revisions in implicit deflators

A considerable amount of more recent and/or more comprehensive data has become available since the original industry series were prepared. For example, information from the 1958 input-output study has been used in conjunction with the data derived from the 1947 interindustry study for selecting and weighting price relatives to deflate goods and services purchased by manufacturing industries. The Bureau of Labor Statistics has prepared special retabulations of the wholesale price indexes for the period since 1958 consistent with the indexes provided for earlier years. These data permitted a more precise deflation of manufacturers' output and purchases for this period than was previously possible. In addition, information from the 1958 and the 1963 *Censuses of Business* was used to develop more representative composite price indexes for deflating sales by wholesalers and retailers. The use of these and other sources has particularly affected the deflators for manufacturing, contract construction, and trade.

6. This adjustment in the industry total was not distributed among the gross product components.

Table 1.—Gross Product in Current Dollars by Industry: 1947–66
(Billions of dollars)

Industry	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
All industries, total (GNP).....	231.3	257.6	256.5	284.8	328.4	345.6	364.9	364.8	396.0	419.2	441.1	447.3	433.7	503.7	530.1	580.3	596.6	631.7	661.2
Employee compensation.....	128.9	142.1	141.0	164.8	180.7	195.3	204.1	208.4	224.5	243.1	256.0	257.8	270.1	294.2	302.6	322.0	341.0	355.7	361.9
Net interest.....	1.9	1.8	1.9	2.0	2.8	2.6	2.6	3.4	4.1	4.6	5.0	5.8	7.1	8.4	10.0	11.0	13.8	15.5	17.8
Capital consumption allowances.....	13.2	14.8	14.6	18.3	21.2	23.2	25.7	28.2	31.5	34.1	37.1	38.9	41.4	43.4	45.2	50.0	52.8	58.0	59.6
Indirect business taxes.....	19.0	20.8	22.0	24.1	26.1	28.6	30.8	33.4	35.3	38.3	38.8	40.4	43.2	47.1	49.7	53.6	57.0	61.0	63.2
Profit-type income.....	69.2	91.3	74.8	84.3	94.8	99.6	95.2	91.8	102.5	102.4	103.6	102.2	113.7	111.7	112.3	121.1	129.3	134.9	147.3
Statistical discrepancy.....	.9	-2.0	.3	1.5	2.3	2.2	3.0	2.7	2.1	-1.1	(*)	1.8	-0.9	-1.0	-0.8	.5	-1.4	-1.6	
Agriculture, forestry, and fisheries.....	26.8	24.0	19.5	20.8	23.0	23.1	21.3	26.7	18.8	19.7	19.6	22.9	20.8	21.7	22.1	22.6	23.0	22.9	25.4
Employee compensation.....	2.0	3.3	3.1	3.1	3.2	3.2	3.1	2.9	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.5	3.4	3.5	
Net interest.....	.3	.3	.4	.4	.6	.6	.6	.5	.6	.7	.8	.8	1.0	1.1	1.3	1.3	1.4	1.6	
Capital consumption allowances.....	1.5	1.9	2.2	2.6	3.0	3.2	3.8	3.5	3.6	3.8	4.0	4.1	4.2	4.1	4.3	4.4	4.7	4.0	
Indirect business taxes.....	.7	.7	.8	.8	.9	.9	1.0	1.0	1.0	1.1	1.1	1.2	1.3	1.4	1.4	1.5	1.6	1.7	
Profit-type income.....	15.3	17.8	13.0	13.8	16.1	15.2	13.8	12.7	11.7	11.4	10.9	12.9	11.3	11.8	12.0	12.1	12.1	10.7	
Farms.....	20.2	23.3	18.8	20.0	22.9	22.2	20.8	19.6	18.6	18.6	18.4	20.8	19.6	20.3	20.9	21.3	21.5	20.4	
Employee compensation.....	2.8	3.0	2.9	2.9	2.9	2.7	2.0	2.4	2.4	2.5	2.6	2.7	2.8	2.9	2.8	2.9	2.9	2.8	
Net interest.....	.3	.3	.4	.4	.5	.6	.6	.6	.6	.7	.7	.8	1.0	1.1	1.3	1.3	1.4	1.6	
Capital consumption allowances.....	1.4	1.9	2.2	2.6	3.0	3.1	3.8	3.4	3.5	3.7	3.8	4.0	4.0	4.0	4.1	4.2	4.5	4.7	
Indirect business taxes.....	.8	.7	.8	.8	.9	.9	.9	.9	1.0	1.1	1.1	1.2	1.3	1.3	1.3	1.4	1.5	1.6	
Profit-type income.....	15.1	17.4	12.6	13.4	16.7	14.6	12.9	12.3	11.3	11.0	10.4	12.5	10.8	11.4	11.8	11.6	11.6	10.1	
Mining.....	4.8	9.3	8.1	9.3	10.3	10.1	10.4	10.8	12.3	13.4	13.5	12.4	12.2	12.7	12.0	13.0	13.1	13.3	
Employee compensation.....	2.1	2.6	2.3	2.5	4.0	4.1	4.2	4.3	4.1	4.7	4.8	4.3	4.4	4.4	4.3	4.4	4.4	4.6	
Net interest.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	
Capital consumption allowances.....	.3	1.3	1.1	1.3	1.5	1.6	1.3	1.9	2.4	2.5	2.8	2.7	2.8	2.0	3.0	3.0	3.0	3.1	
Indirect business taxes.....	.2	.4	.4	.6	.6	.6	.6	.6	.6	.7	.7	.8	.8	.8	.9	.9	.9	1.0	
Profit-type income.....	2.8	4.3	3.2	3.9	4.2	3.8	4.8	4.8	5.1	5.6	5.3	4.6	4.2	4.3	4.7	4.6	4.7	4.6	
Contract construction.....	8.8	11.8	11.3	13.7	15.9	16.2	16.4	16.7	18.9	19.9	20.9	20.7	22.3	22.7	23.4	24.9	26.4	28.7	
Employee compensation.....	4.1	7.4	7.3	8.4	10.4	11.3	11.3	12.1	13.0	14.5	14.9	14.9	16.3	16.8	17.2	18.3	19.5	21.2	
Net interest.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	
Capital consumption allowances.....	.3	.4	.5	.5	.6	.7	.7	.8	1.0	1.1	1.1	1.2	1.3	1.3	1.3	1.4	1.5	1.6	
Indirect business taxes.....	.1	.2	.2	.3	.3	.3	.3	.4	.4	.5	.5	.5	.6	.6	.6	.7	.7	.8	
Profit-type income.....	2.8	3.2	2.3	3.5	2.7	3.9	3.7	3.6	3.6	4.0	4.3	4.0	4.2	3.9	4.2	4.4	4.0	5.1	
Manufacturing.....	66.9	74.7	72.4	82.8	93.6	102.9	112.4	104.2	120.8	128.8	131.4	121.7	141.1	144.4	144.2	158.8	167.6	179.9	
Employee compensation.....	45.3	49.4	47.0	53.5	68.6	68.7	79.2	72.7	79.9	88.3	90.1	88.2	93.8	96.4	99.7	108.2	112.0	120.5	
Net interest.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	
Capital consumption allowances.....	2.4	2.9	3.2	3.4	4.0	4.7	5.4	6.4	7.2	7.7	8.6	8.7	9.4	9.8	10.4	12.2	12.8	13.7	
Indirect business taxes.....	6.1	6.2	6.4	7.1	7.5	8.6	8.2	8.7	9.7	10.1	10.7	10.6	11.5	12.4	12.5	13.5	14.3	15.1	
Profit-type income.....	13.1	16.2	15.4	19.8	28.6	20.3	21.0	18.4	24.1	22.5	21.9	17.5	24.3	22.6	21.3	24.9	25.8	30.1	
Non-durable goods.....	32.8	26.8	24.8	28.0	43.2	44.1	48.2	43.3	50.2	53.2	53.8	54.0	59.9	61.9	68.0	60.0	69.6	74.4	
Employee compensation.....	20.0	21.8	21.5	23.5	26.0	27.3	29.2	29.2	31.2	33.4	34.6	34.7	37.6	38.9	39.9	42.1	43.5	46.0	
Net interest.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	
Capital consumption allowances.....	1.2	1.4	1.6	1.7	1.9	2.1	2.3	2.7	3.1	3.8	3.7	4.1	4.3	4.3	4.7	5.5	5.8	6.2	
Indirect business taxes.....	4.8	4.7	4.8	5.2	5.4	6.1	6.3	6.1	6.4	7.0	7.3	7.5	7.9	8.6	8.8	9.2	9.6	10.1	
Profit-type income.....	7.3	8.7	7.0	7.7	10.0	8.5	8.5	7.4	9.5	9.4	8.1	7.6	10.1	10.0	9.5	9.9	10.5	11.3	
Durable goods.....	33.0	38.1	37.1	45.7	55.3	68.8	68.7	70.5	73.6	73.6	77.5	69.6	81.3	82.5	81.2	81.0	87.4	105.4	
Employee compensation.....	25.2	27.5	25.5	30.0	37.0	41.5	47.1	43.5	48.6	53.0	55.4	51.6	58.2	60.5	59.5	65.0	69.4	74.5	
Net interest.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	
Capital consumption allowances.....	1.3	1.5	1.6	1.8	2.1	2.6	3.2	3.7	4.1	4.4	4.9	5.0	5.1	5.5	5.8	6.7	7.0	7.5	
Indirect business taxes.....	1.3	1.5	1.6	1.9	2.1	2.4	3.0	2.6	3.3	3.1	3.4	3.1	3.6	3.8	3.7	4.3	4.7	5.0	
Profit-type income.....	5.8	7.6	8.4	12.1	18.6	12.3	12.6	11.0	14.6	13.1	13.6	9.8	14.2	12.8	11.8	14.7	16.3	18.4	
Transportation.....	13.4	15.1	14.5	16.9	18.8	18.8	19.4	18.2	19.9	21.2	21.9	21.0	22.1	22.6	22.7	24.0	25.1	26.8	
Employee compensation.....	8.7	10.4	9.9	10.5	12.0	12.6	13.1	12.8	13.3	14.4	15.1	14.5	15.5	16.0	15.9	16.6	17.1	18.0	
Net interest.....	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	
Capital consumption allowances.....	.8	1.1	1.2	1.2	1.5	1.7	1.9	2.0	2.3	2.4	2.6	2.7	2.7	2.8	2.9	3.3	3.4	3.6	
Indirect business taxes.....	1.2	1.3	1.3	1.4	1.6	1.7	1.9	1.8	1.9	2.0	2.1	1.9	1.7	1.8	1.9	2.0	2.1	2.2	
Profit-type income.....	1.5	2.1	1.8	2.5	2.5	2.2	1.6	2.1	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.7	2.1	2.4	
Railroads.....	7.3	8.3	7.5	8.3	9.2	9.3	9.4	8.2	8.9	9.4	9.3	9.4	8.4	8.1	7.9	8.1	8.3	8.0	
Employee compensation.....	5.4	5.8	5.4	5.0	6.4	6.5	6.5	5.9	6.1	6.6	6.6	6.1	6.2	6.1	5.9	5.9	5.9	6.0	
Net interest.....	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	
Capital consumption allowances.....	.3	.4	.4	.4	.6	.7	.8	.9	1.0	1.0	1.0	1.0	.9	.9	.9	1.1	1.1	1.2	
Indirect business taxes.....	.7	.8	.8	.8	.9	.9	.9	.8	.8	.8	.8	.7	.6	.6	.6	.6	.6	.6	
Profit-type income.....	.5	1.0	.7	1.2	1.1	1.2	1.0	.4	.7	.7	.6	.9	.4	.3	.4	.3	.5	.6	
Motor freight & warehousing.....	2.4	2.8	2.9	3.0	3.9	4.3	4.3	4.9	5.5	6.0	6.4	6.4	7.2	7.4	7.0	8.3	8.7	9.3	
Employee compensation.....	1.5	1.7	1.7	2.1	2.4	2.6	3.0	3.1	3.8	4.0	4.1	4.7	5.0	5.0	5.4	5.8	6.2	6.7	
Net interest.....	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	
Capital consumption allowances.....	.2	.3	.3	.4	.4	.4	.6	.6	.7	.8	.8	.9	.9	.9	.9	1.0	1.1	1.1	
Indirect business taxes.....	.2	.2	.2	.2	.2	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	
Profit-type income.....	.5	.6	.6	.7	.7	.7	.8	.8	.8	.8	.8	.8	.8	.8	.8	.9	1.1	1.1	
Communication.....	3.1	3.8	4.2	4.8	5.1	5.8	6.3	6.5	7.1	7.7	8.3	8.9	9.7	10.4	10.0	11.0	12.9	13.8	
Employee compensation.....	2.0	2.3	2.4	2.5	2.8	3.1	3.4	3.6	3.8	4.2	4.5	4.5	4.7	4.9	5.1	5.4	5.6	6.1	
Net interest.....	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.2	.2	.3	.3	.4	.4	.4	
Capital consumption allowances.....	.3	.3	.3	.4	.4	.6	.6	.6	.8	.7	.7	.8	.9	1.0	1.1	1.3	1.0	1.8	
Indirect business taxes.....	.4	.7	.8	.9	1.0	1.0	1.1	1.0	1.0	1.1	1.2	1.2	1.3	1.4	1.5	1.6	1.7	1.9	
Profit-type income.....	.2	.3	.4	.0	.8	.9	1.1	1.2	1.5	1.6	1.6	2.1	2.0	2.7	2.8	3.3	3.0	3.7	
Telephone, telegraph & related services.....	2.0	3.5	3.8	4.3	4.7	5.2	5.8	5.9	6.4	6.0	7.5	8.0	8.8	9.3	10.0	10.8	11.0	12.0	
Employee compensation.....	1.8	2.1	2.2	2.3	2.5	2.8	3.0	3.1	3.4	3.7	3.9	3.8	4.1	4.3	4.6	4.7	4.8	5.3	
Net																			

Table 1.—Gross Product in Current Dollars by Industry: 1947-65—Continued
(Billions of dollars)

Industry	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Electric, gas, & sanitary services	2.8	4.3	4.3	5.3	4.1	6.6	3.2	8.0	8.7	9.4	10.0	10.7	11.7	12.1	13.4	14.2	14.8	15.8	16.5
Employee compensation	1.0	1.8	2.0	2.1	2.2	2.5	2.7	2.9	3.0	3.3	3.5	3.7	4.0	4.2	4.4	4.6	4.7	5.0	5.2
Net interest	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.1	1.2	1.3	1.3	1.4	1.5
Capital consumption allowances	0.5	0.6	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2
Indirect business taxes	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	1.0	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.6	1.7	1.8
Profit-type income	1.0	1.1	1.4	1.4	1.6	2.0	2.3	2.4	2.6	2.6	2.7	2.7	3.2	2.7	3.8	3.9	4.3	4.7	4.9
Wholesale and retail trade	43.4	48.4	48.0	51.3	50.4	58.5	59.7	58.9	64.2	70.4	73.8	75.1	82.9	84.3	87.0	92.7	97.2	104.6	111.4
Employee compensation	22.4	24.7	25.0	26.7	29.4	31.0	32.0	33.6	36.1	39.1	41.2	42.0	45.3	45.1	49.1	52.8	55.0	58.5	62.1
Net interest	(*)	(*)	(*)	(*)	1.1	1.1	(*)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.4	1.4	1.5	1.6
Capital consumption allowances	1.5	1.8	2.3	2.4	2.7	3.0	3.3	3.3	3.5	3.9	4.2	4.2	4.5	4.4	4.6	4.8	5.2	5.5	5.7
Indirect business taxes	3.2	3.9	3.2	3.9	7.6	8.3	8.6	8.9	9.6	10.3	11.0	11.9	13.2	13.4	15.3	16.5	17.6	19.0	20.3
Profit-type income	14.4	15.9	14.6	16.1	16.6	18.3	19.0	19.0	19.6	21.5	22.7	23.0	25.0	24.9	27.8	30.0	31.0	32.9	34.2
Wholesale trade	15.5	17.3	15.0	18.8	21.3	21.5	21.9	22.2	23.1	27.5	29.8	29.4	32.4	33.4	34.6	38.0	39.8	41.7	44.8
Employee compensation	8.1	9.0	8.9	9.5	10.7	11.2	11.9	12.3	12.1	14.6	15.4	15.9	17.0	18.1	16.7	19.7	20.8	22.2	23.9
Net interest	(*)	(*)	(*)	(*)	1.1	1.1	(*)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.3	1.3
Capital consumption allowances	0.4	0.5	0.0	0.7	0.9	0.9	0.9	1.0	1.2	1.3	1.5	1.4	1.5	1.4	1.5	1.6	1.8	1.9	1.9
Indirect business taxes	2.8	3.1	3.3	3.8	4.1	4.4	4.6	4.8	5.3	5.9	6.2	6.5	7.3	7.3	8.1	8.8	9.4	10.0	11.1
Profit-type income	4.2	4.6	3.9	4.8	5.6	5.9	6.4	6.0	6.5	7.5	8.5	8.6	9.0	8.7	8.2	8.5	8.8	9.3	9.6
Retail trade	27.9	31.0	31.3	32.5	35.1	37.0	37.8	38.7	41.1	42.9	45.0	45.7	49.5	50.9	52.2	55.8	58.4	63.2	66.6
Employee compensation	14.3	15.7	16.1	17.8	18.7	19.7	21.0	21.5	23.0	24.5	25.8	26.1	28.4	29.0	30.4	32.3	34.2	36.6	39.3
Net interest	(*)	(*)	(*)	(*)	1.0	1.0	(*)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.2	1.3	1.3
Capital consumption allowances	1.1	1.2	1.6	1.7	1.8	2.1	2.2	2.2	2.6	2.6	2.8	2.8	3.0	3.0	3.0	3.2	3.4	3.6	3.7
Indirect business taxes	2.4	2.8	2.9	3.1	3.6	3.8	4.1	4.0	4.8	4.9	5.3	5.4	5.9	6.0	6.6	7.1	7.7	8.3	9.1
Profit-type income	10.2	11.3	10.7	10.4	11.0	11.4	12.6	12.9	14.4	15.0	15.2	15.3	17.0	17.2	17.5	18.5	19.6	20.9	21.6
Finance, insurance, & real estate	22.7	25.6	27.7	30.7	33.5	37.8	40.9	44.7	48.1	51.2	54.9	58.2	63.6	67.1	71.6	76.2	80.9	86.6	92.5
Employee compensation	4.7	6.3	6.6	8.2	8.8	7.3	8.0	8.7	9.5	10.4	11.1	11.9	12.9	13.8	14.9	15.8	16.6	17.7	18.9
Net interest	0.8	0.5	0.6	0.6	0.6	0.7	0.9	1.0	1.5	1.8	2.0	2.6	2.3	2.4	2.3	2.1	2.1	2.6	2.6
Capital consumption allowances	3.3	3.5	3.8	4.2	4.9	5.3	5.7	6.4	7.1	7.6	8.5	9.0	9.5	10.5	11.4	12.3	13.0	14.1	14.9
Indirect business taxes	3.4	3.7	4.3	4.5	5.0	5.4	6.0	6.4	7.0	7.7	8.5	8.4	10.2	11.3	12.4	13.4	14.5	15.7	16.9
Profit-type income	10.6	12.4	13.7	15.3	18.6	18.4	20.2	21.7	22.7	23.4	24.3	25.6	27.2	27.7	27.7	28.9	29.1	30.6	32.0
Finance & insurance	5.1	5.9	6.7	7.0	7.7	8.7	9.8	10.8	11.3	12.1	12.0	14.3	15.5	16.8	17.7	18.1	18.8	19.9	21.1
Employee compensation	3.8	4.8	4.3	4.8	5.3	5.8	6.4	7.0	7.5	8.3	9.0	9.8	10.7	11.3	12.5	13.1	13.9	14.9	15.8
Net interest	-1.2	-1.7	-2.0	-2.3	-2.7	-3.0	-3.2	-3.7	-4.2	-4.5	-4.7	-5.5	-5.1	-5.1	-5.4	-5.2	-5.3	-5.8	-5.8
Capital consumption allowances	1.1	1.2	1.2	1.3	1.3	1.3	1.3	1.4	1.5	1.5	1.6	1.6	1.7	1.8	1.8	1.9	1.9	2.0	2.1
Indirect business taxes	0.4	0.4	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.7	1.8	1.9
Profit-type income	2.2	3.0	3.5	3.8	4.3	4.9	5.5	5.8	6.1	6.6	6.9	7.5	8.7	9.3	9.4	9.8	9.6	10.4	11.0
Services	20.4	22.2	22.9	24.3	26.1	28.0	29.9	31.0	34.5	37.9	40.8	42.9	46.7	49.3	52.9	58.9	60.9	64.3	71.0
Employee compensation	12.2	13.1	13.6	14.4	15.7	16.8	18.0	18.8	20.6	22.7	24.5	25.8	28.0	30.4	32.1	34.4	37.1	40.1	43.5
Net interest	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.0
Capital consumption allowances	1.0	1.2	1.4	1.5	1.7	1.8	1.9	2.2	2.3	2.7	3.0	3.2	3.5	3.6	4.0	4.4	4.8	5.2	5.7
Indirect business taxes	0.9	1.0	1.1	1.1	1.1	1.1	1.2	1.1	1.1	1.2	1.3	1.3	1.4	1.6	1.7	1.8	2.0	2.1	2.3
Profit-type income	6.2	6.8	6.8	7.2	7.7	8.1	8.6	8.8	10.3	11.0	11.7	12.2	13.4	13.7	14.5	15.5	16.4	17.8	19.6
Households & institutions	5.1	5.6	5.9	6.4	6.9	7.2	7.8	8.1	9.1	9.8	10.5	11.4	12.3	13.2	14.0	15.0	16.2	17.3	18.3
Employee compensation	5.1	5.6	5.9	6.4	6.9	7.2	7.8	8.1	9.1	9.8	10.5	11.4	12.3	13.2	14.0	15.0	16.2	17.3	18.3
Net interest																			
Capital consumption allowances																			
Indirect business taxes																			
Profit-type income																			
Government & government enterprises	18.2	20.2	22.4	21.7	20.5	35.1	38.3	36.5	38.6	45.7	43.8	47.3	54.1	43.7	57.0	61.5	68.6	71.3	77.0
Employee compensation	18.7	19.8	22.0	21.6	20.4	34.7	38.5	36.1	38.1	40.7	43.4	46.9	49.3	52.9	58.6	60.7	64.7	70.0	75.2
Net interest																			
Capital consumption allowances																			
Indirect business taxes																			
Profit-type income	0.5	0.4	0.3	0.1	0.1	0.5	0.7	0.7	0.5	0.5	0.5	0.5	0.9	0.7	0.5	0.7	0.7	0.7	0.7
General government	16.7	17.4	19.4	20.9	27.4	31.3	31.9	32.5	34.2	36.6	39.1	42.1	44.3	47.8	50.9	54.7	58.1	63.0	67.8
Employee compensation	16.7	17.4	19.4	20.9	27.4	31.2	31.9	32.5	34.2	36.6	39.1	42.1	44.3	47.8	50.9	54.7	58.1	63.0	67.8
Net interest																			
Capital consumption allowances																			
Indirect business taxes																			
Profit-type income																			
Rest of the world	0.8	1.0	1.0	1.2	1.3	1.3	1.3	1.4	1.6	2.1	2.2	2.0	2.2	2.4	2.9	3.3	3.4	4.0	4.3
Employee compensation	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Net interest	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.5	0.6	0.7	0.8	0.9	1.0
Capital consumption allowances																			
Indirect business taxes																			
Profit-type income	0.7	0.8	0.8	1.0	1.3	1.1	1.3	1.4	1.6	1.8	1.9	1.7	1.8	1.9	2.3	2.6	2.6	3.0	3.2

*Less than \$50 million.

Note.—Employee compensation consists of wages, salaries, and supplements. Net interest is net interest component of national income. Capital consumption allowances consist of depreciation and accidental damage to fixed business property. Indirect business taxes consist of indirect business tax and nontax liability and business transfer payments. Profit-type income consists of corporate profits after inventory valuation adjustment, proprietors' income, rental income of persons, and surplus of government enterprises, less subsidies.

Capital consumption allowances and profits by industry differ somewhat from the hitherto published figures because these two items have been reallocated by industry from a company to an establishment basis.

Details may not add to totals because of rounding.

Source: U.S. Department of Commerce, Office of Business Economics.

New procedures were also used to develop price indexes for the railroad and electric utilities industries. In these industries, the price per unit paid by the user declines as the number

of units purchased increases—e.g., as distance lengthens, the charge per mile declines. The previously published measures of railroad and public utility real output gave equal weight to each

ton-mile or kilowatt-hour. The weights for the new measures are based upon the appropriate 1958 rate schedules and do not reflect changes in average unit values arising from changes in quanti-

Table 2.—Gross Product in Constant Dollars by Industry: 1947-65

(Billions of 1958 dollars)

Industry	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
All industries, total (GNP).....	389.9	323.7	324.1	355.2	383.4	395.1	412.8	407.4	438.8	448.1	452.5	447.3	475.9	487.7	497.2	523.2	551.0	580.8	614.4
Agriculture, forestry, & fisheries.....	17.9	28.0	19.4	20.4	19.5	20.2	21.2	21.6	22.1	22.0	21.5	22.0	22.3	23.1	23.4	23.8	24.0	23.3	25.1
Farms.....	17.0	28.0	18.4	19.4	18.4	19.0	20.0	20.4	20.9	20.8	20.3	20.6	21.1	21.9	22.2	22.1	22.8	22.0	23.6
Mining.....	10.2	18.7	9.6	10.7	11.7	11.7	12.0	11.7	12.8	13.6	13.6	12.4	12.8	13.1	13.8	13.6	13.9	14.4	14.6
Contract construction.....	12.9	14.1	14.7	16.2	18.2	18.3	18.9	19.8	20.6	21.3	21.1	21.7	22.0	21.7	21.4	21.7	21.6	22.7	23.2
Manufacturing.....	94.3	80.9	80.9	105.5	116.3	118.7	128.6	119.5	133.6	134.1	134.5	123.7	139.0	140.9	140.4	154.6	162.4	172.6	183.7
Non-durable goods industries.....	39.4	41.3	40.4	44.7	47.2	47.3	48.3	48.3	52.9	55.0	54.9	54.0	58.0	58.9	59.7	64.7	66.8	71.3	73.0
Durable goods industries.....	54.9	39.6	40.5	60.8	69.0	71.4	79.3	71.2	80.7	79.1	79.6	69.6	73.9	81.0	79.7	90.0	95.6	101.3	110.7
Transportation.....	21.1	20.7	15.3	19.7	21.7	21.2	21.2	21.0	22.0	22.8	22.5	21.0	22.2	22.5	22.5	23.6	25.2	26.5	27.8
Railroads.....	10.7	10.6	8.7	9.5	10.6	10.1	9.9	8.9	9.9	10.0	9.5	8.4	8.9	8.7	8.7	9.2	9.7	10.2	10.7
Motor freight & warehousing.....	8.1	3.4	3.5	4.3	4.6	4.7	5.2	5.2	6.9	6.3	6.4	6.4	7.0	7.2	7.6	8.0	8.5	8.7	9.2
Communication.....	4.1	4.7	4.9	5.3	5.3	5.1	4.7	4.6	7.5	8.0	8.5	8.9	9.5	10.0	10.6	11.5	12.3	13.2	14.3
Telephone & telegraph.....	2.8	4.4	4.6	4.8	4.8	4.6	4.1	4.2	6.7	7.2	7.7	8.0	8.6	9.1	9.7	10.6	11.3	12.2	13.3
Electric, gas, & sanitary services.....	4.4	5.0	5.5	6.9	6.8	7.3	7.5	8.0	9.1	9.7	10.3	10.7	11.6	12.4	12.9	13.6	14.4	15.4	16.1
Wholesale & retail trade.....	52.7	54.2	55.2	60.4	61.4	62.9	64.9	63.5	71.8	73.8	73.1	75.1	80.6	83.3	83.6	88.9	91.6	98.6	105.5
Wholesale trade.....	19.6	20.3	20.2	22.0	23.0	23.6	24.0	24.2	27.2	28.5	28.6	29.4	32.2	33.1	34.6	36.3	38.7	41.5	44.6
Retail trade.....	33.1	33.9	35.1	38.4	38.4	39.4	40.9	41.3	44.6	45.3	44.5	45.7	48.6	49.1	48.9	52.1	54.1	57.1	61.0
Finance, insurance & real estate.....	31.6	35.3	37.6	41.0	42.9	44.7	46.5	49.9	52.7	54.8	57.0	59.3	61.4	64.1	67.1	71.3	74.4	78.2	82.4
Finance & insurance.....	18.2	8.9	10.2	11.9	11.3	11.6	11.9	12.8	15.3	12.9	14.1	14.3	14.8	14.9	15.4	16.2	16.4	17.0	17.6
Services.....	34.6	31.9	32.1	33.1	34.0	34.5	35.8	35.4	38.3	40.2	41.3	42.9	45.1	46.7	48.2	50.6	52.2	54.7	57.1
Households & institutions.....	7.6	7.9	8.2	8.7	8.8	8.8	9.1	9.3	10.1	10.6	10.9	11.4	11.7	12.3	12.4	12.9	13.2	13.6	14.0
Government & government enterprises.....	32.4	33.3	34.7	35.9	42.8	47.3	47.1	45.1	48.0	46.2	46.9	47.3	47.9	49.2	50.6	52.6	53.9	55.1	58.1
Federal government.....	28.6	28.7	30.1	31.1	38.8	41.8	41.7	40.9	40.7	41.3	41.9	42.1	42.6	43.7	44.8	46.9	47.8	49.3	51.9
Rest of the world.....	1.1	1.2	1.2	1.3	1.2	1.2	1.2	1.6	1.8	2.0	2.1	2.0	2.2	2.3	2.3	2.4	2.4	2.9	4.1
Residual.....	-4.5	-4.8	-2.2	.1	.1	1.1	1.0	.2	-2.2	-2.9	-2.4	1.6	-1.9	-1.7	.1	.9	.1	-1.0	-2.8

Notes: Details may not add to totals because of rounding and the omission of data for industries included in the major industry category.

Source: U.S. Department of Commerce, Office of Business Economics.

Table 3.—Indexes of Gross Product in Constant (1958) Dollars by Industry: 1947-65

(Index numbers, 1958=100)

Industry	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
All industries, total (GNP).....	68.3	72.4	73.5	79.4	85.7	88.3	92.3	91.0	97.9	99.7	101.1	100.0	106.4	109.8	111.2	118.5	123.2	123.7	137.3
Agriculture, forestry, & fisheries.....	81.3	80.6	88.1	92.4	94.4	91.5	96.1	96.2	100.4	99.9	97.4	100.0	101.1	104.9	106.2	105.8	109.2	105.8	113.8
Farms.....	81.3	81.0	88.4	92.9	93.3	91.2	96.9	97.0	100.4	99.9	97.3	100.0	101.2	105.0	106.3	105.8	109.3	105.8	113.9
Mining.....	82.4	88.9	77.5	86.4	95.0	94.3	97.5	94.3	103.9	106.7	106.7	100.0	104.0	106.4	107.3	109.0	112.8	116.4	118.6
Contract construction.....	62.3	68.2	70.8	78.3	88.2	88.7	91.4	93.4	100.4	105.6	102.2	100.0	106.6	105.1	103.5	104.0	103.9	109.8	112.0
Manufacturing.....	74.2	71.8	73.5	85.3	98.9	96.0	104.0	96.8	106.0	108.4	108.8	100.0	112.4	113.9	113.5	125.0	121.3	140.4	153.6
Non-durable goods industries.....	73.0	76.4	74.5	82.8	87.4	87.4	91.5	89.3	97.8	101.1	101.7	100.0	109.2	110.9	112.3	119.8	122.7	132.0	149.0
Durable goods industries.....	75.2	78.0	72.5	87.3	98.0	102.6	113.7	102.2	116.9	114.1	114.3	100.0	114.8	116.3	114.5	129.2	127.3	146.9	163.3
Transportation.....	100.6	98.7	87.1	94.2	103.6	101.0	101.2	100.2	105.0	108.7	107.5	100.0	108.1	107.4	107.4	113.5	120.2	128.2	132.7
Railroads.....	126.7	124.0	103.4	112.5	123.6	120.3	117.5	108.1	117.1	119.1	112.3	100.0	105.2	103.8	102.9	108.6	114.9	121.6	128.7
Motor freight & warehousing.....	85.7	53.1	54.0	87.6	71.5	73.0	80.7	89.3	91.9	97.0	100.0	100.0	109.9	112.7	116.3	124.4	132.1	134.0	142.5
Communication.....	44.0	53.1	55.8	58.4	55.5	69.1	75.2	78.8	84.2	89.9	98.6	100.0	107.1	113.4	119.8	129.6	139.4	149.4	161.6
Telephone & telegraph.....	47.0	54.7	57.5	60.2	64.7	70.2	75.9	77.0	83.9	90.1	98.4	100.0	107.9	114.0	121.2	131.2	141.7	152.9	166.0
Electric, gas, & sanitary services.....	48.7	46.8	51.4	55.4	53.5	68.0	72.8	80.0	84.8	90.0	98.0	100.0	108.0	116.4	120.6	127.3	134.6	143.9	150.4
Wholesale & retail trade.....	70.1	72.3	73.6	80.3	81.7	83.8	85.4	87.2	95.4	98.3	100.0	100.0	107.6	109.5	111.2	118.4	123.6	131.6	140.5
Wholesale trade.....	64.6	68.1	68.6	74.7	78.3	80.0	81.7	82.4	92.3	96.9	98.6	100.0	109.6	112.7	117.8	125.2	131.8	141.2	151.6
Retail trade.....	72.4	74.2	76.7	84.0	83.9	86.2	89.4	90.2	97.3	99.2	100.0	100.0	108.3	107.5	107.0	114.0	118.3	124.4	139.4
Finance, insurance & real estate.....	68.1	61.5	63.9	68.2	72.8	75.5	78.0	84.2	89.0	92.6	96.4	100.0	103.7	106.3	113.4	120.3	135.6	132.1	150.2
Finance & insurance.....	71.5	63.2	71.5	75.5	78.5	81.0	83.7	90.3	93.4	97.3	99.7	100.0	100.0	104.5	107.8	113.9	115.0	119.0	123.3
Services.....	71.3	74.4	74.7	77.1	79.2	80.4	83.3	82.5	89.0	93.6	97.5	100.0	105.1	108.7	112.5	115.9	121.7	127.5	132.9
Households & institutions.....	63.2	68.9	71.8	75.6	77.2	78.9	79.6	80.3	85.3	92.7	95.5	100.0	102.7	106.3	108.9	112.7	115.7	119.1	122.0
Government & government enterprises.....	68.6	70.3	73.4	75.9	82.8	99.9	99.7	97.8	97.3	97.7	98.3	100.0	101.3	104.0	104.0	111.3	114.0	118.9	122.9
Federal government.....	67.8	66.1	71.4	73.9	82.2	99.3	99.0	97.0	96.7	96.0	96.6	100.0	101.0	103.8	104.0	111.3	113.6	116.8	120.8
Rest of the world.....	62.7	57.7	61.2	63.6	59.2	60.0	63.8	77.4	88.4	96.4	103.3	100.0	107.5	114.7	145.2	165.2	167.3	193.8	204.3

Notes: Indexes are based on unrounded data and therefore may differ from ones computed from published figures.

Source: U.S. Department of Commerce, Office of Business Economics.

ties purchased. Thus, with the lengthening of the average haul or with the purchase of more kilowatt-hours of electricity per household or business, the new series show larger price increases and smaller increases in real product than the superseded series.

Methods for measuring price changes were also modified for contract construction and for finance and insurance.

Manufacturing output: OBE vs. FRB

Annual estimates of real product originating in manufacturing industries have been compared with the output measures for these industries currently published by the Federal Reserve Board. Although the two series differ statistically and conceptually, the broad pattern of manufacturing output reflected by them has been similar during the postwar period. As summarized in table C, both the OBE and the FRB indexes exhibit a sharp rate of increase from 1947 to 1953, a slower rate of gain until 1960, and rapid gains since 1960. However, for the period 1953-60, the FRB index for manufacturing increased more rapidly than the gross product index.

The FRB indexes for an industry are based on measures of total output (before deduction of intermediate purchases); these are aggregated by using as weights Census value added for a base period. In calculating OBE's measures of real product, intermediate purchases in constant prices are deducted from total output for each year in constant prices. Trends in total output will not be the same as trends in real product if the material requirements per unit of output vary over time. Such variations may occur for any number of reasons, including changes in technology, in the degree of integration of production processes, or in the product mix of the industry's output (e.g., shifts from products with low value added to high value added per unit of output).

There are also other differences between the two measures. The currently published FRB indexes are combined with weights that embody 1957 price relationships for post-1952 data and 1947 price relationships for the years 1947-52, while the OBE indexes use 1958 prices throughout. FRB weights are based on Census value added, while OBE weights are gross product originating. The FRB

uses both physical quantity data and deflated value of output data for its annual indexes from 1947 through the mid-1950's. Since then, the indexes are based partly on physical quantity data and partly on man-hours adjusted for estimated productivity change. The OBE relies primarily on the deflation of data pertaining to the value of output and purchases.

Differences in weights assigned to the component industries account for only a portion of the disparities for most years in the FRB and OBE measures of real manufacturing output. The disparities are related primarily to different movements in total and net output and to the different sets of statistics that the two agencies use. A review of the relationship of the two manufacturing series, including discussions at a detailed industry level within manufacturing, will appear in "Comparison of Federal Reserve and OBE Measures of Real Manufacturing Output, 1947-1964"; this will be published in a book containing papers presented at the December 1966 meeting of the Conference on Research in Income and Wealth, sponsored by the National Bureau of Economic Research.

Table 4.—Implicit Price Deflators of Gross Product by Industry: 1947-65

(Index numbers, 1958=100)

Industry	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
All industries, total (GNP).....	74.6	79.6	79.1	80.3	85.6	87.5	88.3	89.6	90.9	94.0	97.3	100.0	101.6	103.3	104.6	105.9	107.2	108.9	110.9
Agriculture, forestry, & fisheries.....	116.1	120.4	106.5	103.0	122.1	114.7	100.5	96.0	89.4	82.5	81.1	100.0	98.4	94.0	94.6	97.1	95.6	94.4	101.6
Farms.....	119.1	123.9	101.8	103.0	124.6	118.5	101.5	90.0	88.6	80.2	80.9	100.0	92.1	93.6	94.1	96.2	94.9	92.6	100.0
Mining.....	66.6	86.2	84.6	85.0	86.5	88.5	87.6	92.9	95.6	98.6	98.4	100.0	98.2	97.0	96.0	95.0	94.1	92.2	94.9
Contract construction.....	88.6	79.1	78.2	78.2	83.1	88.3	88.0	94.4	96.6	91.7	98.8	100.0	101.2	104.4	109.3	114.0	120.4	123.3	132.4
Manufacturing.....	72.9	77.6	79.2	79.4	84.9	88.7	87.1	88.9	90.5	94.0	97.6	100.0	101.6	102.5	102.7	102.7	103.8	103.6	104.2
Non-durable goods industries.....	84.4	88.7	80.4	85.0	91.7	93.2	93.5	94.3	95.2	97.4	97.8	100.0	101.6	103.3	103.8	103.4	104.2	104.3	106.2
Durable goods industries.....	64.2	69.3	73.4	75.2	80.2	82.3	89.1	95.2	97.4	92.0	97.5	100.0	101.6	101.8	101.8	102.2	101.9	102.0	102.9
Transportation.....	64.0	73.1	70.4	80.6	88.0	82.9	91.7	84.5	90.4	93.1	97.3	100.0	98.2	99.9	100.6	100.9	99.8	101.2	102.6
Railroads.....	98.7	79.3	86.3	87.3	89.8	92.6	96.0	92.2	95.6	93.5	98.4	100.0	94.7	92.9	90.9	88.9	85.7	83.8	84.8
Motor freight & warehousing.....	78.4	83.2	84.7	81.0	83.6	90.8	92.7	94.3	92.7	96.5	99.2	100.0	101.5	102.0	101.8	103.5	103.1	107.4	103.9
Communication.....	78.2	79.9	82.7	82.6	89.2	92.1	94.6	95.1	95.0	96.6	97.6	100.0	102.4	103.5	103.6	104.0	104.3	104.6	102.9
Telephone & telegraph.....	78.3	79.7	82.4	87.3	89.2	92.1	96.3	94.4	95.0	96.1	97.6	100.0	101.7	102.6	102.9	102.7	102.7	102.7	100.6
Electric, gas, & sanitary services.....	88.7	85.1	88.0	89.0	99.1	91.0	92.0	93.7	95.3	90.7	97.5	100.0	101.1	102.0	103.6	103.8	103.4	103.6	103.0
Wholesale & retail trade.....	82.4	86.2	88.9	85.0	91.9	93.0	92.1	92.9	92.4	93.3	98.3	100.0	101.5	102.4	104.1	104.2	104.7	106.0	105.6
Wholesale trade.....	70.3	85.3	82.6	85.5	92.6	91.5	91.2	91.5	92.6	95.4	98.3	100.0	100.7	100.4	100.1	100.2	100.3	100.5	100.5
Retail trade.....	84.2	91.5	89.4	84.0	91.5	93.9	92.9	93.8	92.3	94.7	97.7	100.0	102.0	103.5	100.7	103.1	107.5	118.3	100.2
Finance, insurance, & real estate.....	63.8	60.9	73.2	74.9	78.8	82.9	87.4	89.6	91.3	93.8	96.8	100.0	103.4	106.8	106.6	107.0	108.8	110.8	112.3
Finance & insurance.....	50.3	59.9	65.2	65.4	69.0	75.2	82.0	85.6	85.2	87.0	92.0	100.0	109.3	112.4	115.0	114.5	114.5	117.4	119.9
Services.....	65.8	69.6	71.5	73.8	77.3	81.0	84.6	87.0	89.3	94.2	97.5	100.0	108.5	106.8	102.4	112.2	116.7	121.0	124.3
Households & institutions.....	63.1	71.0	72.6	74.4	78.1	82.0	86.4	87.9	89.3	92.4	90.2	100.0	104.0	108.6	112.3	116.2	120.9	126.7	131.4
Government & government enterprises.....	48.3	60.8	64.4	66.1	69.5	74.5	77.0	79.9	84.0	88.2	93.4	100.0	104.7	109.2	112.7	118.0	122.4	126.9	132.5
General government.....	58.5	60.6	64.7	67.1	70.6	74.4	78.5	79.5	84.0	88.7	93.3	100.0	104.2	109.6	118.0	118.6	121.6	128.1	133.8
Rest of the world.....																			

NOTE: Indexes are based on unrounded data and therefore may differ from ones computed from published figures.

Sources: U.S. Department of Commerce, Office of Business Economics.